

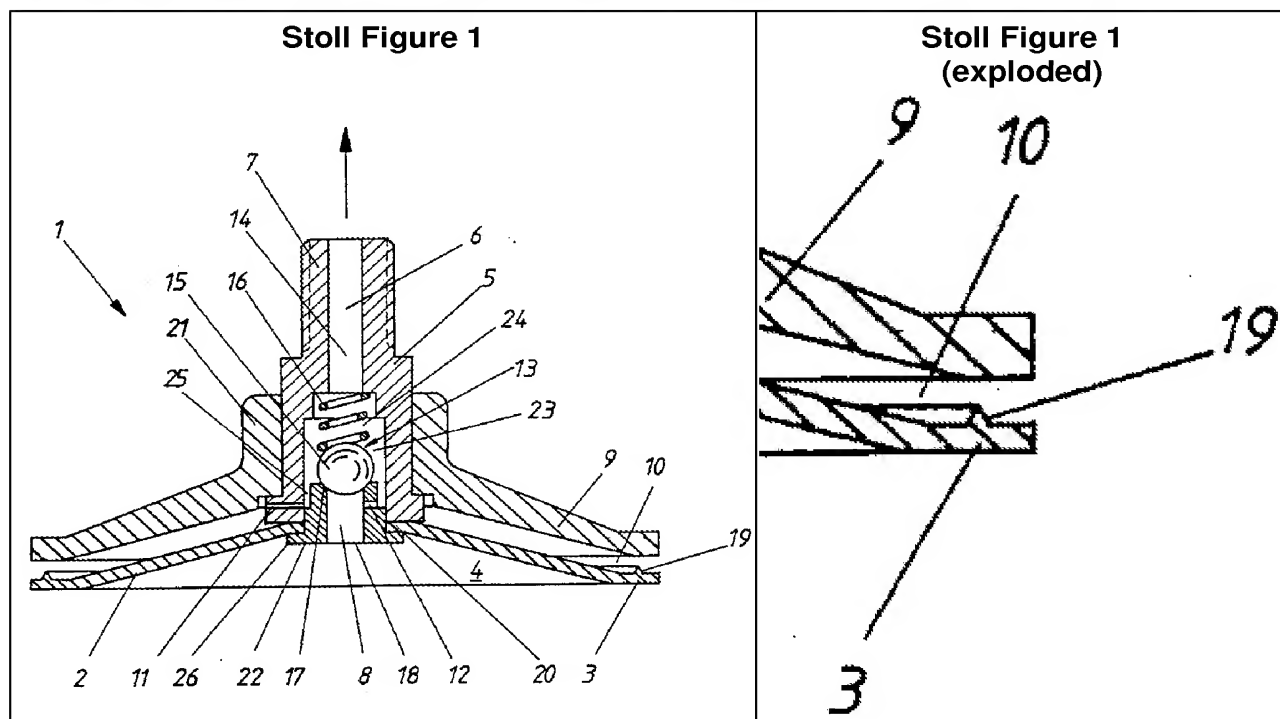
Remarks

In this paper, new independent Claim 12 has been added and dependent Claims 2, 6 and 8 have been cancelled. Therefore Claims 1, 3–5, 7 and 9–12 are currently pending in this application. Claims 1, 5 and 12 are independent.

Claim Rejections Under 35 U.S.C. § 103(a) (Stoll + Zou + Choi + Doran)

The Examiner has rejected Claims 1–11 as being unpatentable over U.S. Patent 4,858,976 (“Stoll”) in view of U.S. Patent Application Publication 2002/0113181 (“Zou”), Korean Patent Publication 20–0302081 (“Choi”) and U.S. Patent 6,856,761 (“Doran”). Claims 1 and 5 are independent. Claims 2, 6 and 8 have been cancelled.

Stoll discloses a suction holder, an illustration of which is provided in Figure 1. To facilitate the foregoing discussion, provided below is a reproduction of Figure 1 of Stoll, as well as an exploded view of the peripheral portion of the suction holder.



As illustrated in these figures, the Stoll suction holder 1 includes a lower suction plate 2 of flexible material that comes into contact with the article to be handled (not shown)

when the suction holder 1 is placed thereon (3:6–10). The suction plate 2 has an outer peripheral part 3 that is designed in the form of a sealing surface (3:10–15). The suction holder 1 also includes a cover plate 9 which is arranged concentrically adjacent to the top surface of the suction plate 2 (3:32–35). Between the suction plate 2 and the cover plate 9 is a peripherally extending annular gap 10 which opens freely outwards in a radial direction (3:40–46). A circumferential rib 19 is molded on the top side of the suction plate 2 in the outer peripheral part 3; this circumferential rib 19 makes sealing contact with the cover plate 9 (5:40–44).

A. Stoll does not disclose a suction plate with “an inclined lift surface” and a vacuum wall with “an inclined compression surface that is configured to slide along the inclined lift surface of the suction plate”.

The Examiner appears to have taken the position that the circumferential rib 19 disclosed in Stoll corresponds to the “vacuum wall” recited in Claims 1 and 5. However, the Applicant has amended independent Claims 1 and 5 to clarify the distinctions between the recited “vacuum wall” and the circumferential rib 19 disclosed in Stoll. For example, Claims 1 and 5 now recite that the suction plate has “an inclined lift surface” and that the vacuum wall has “an inclined compression surface that is configured to **slide along** the inclined lift surface of the suction plate during the adhering of the vacuum fixer onto the adhered surface” (emphasis added). This feature was disclosed, for example, in Paragraph [25] of the originally-filed application disclosure. In contrast, Stoll simply discloses that the circumferential rib 19 makes “sealing contact with the cover plate” (5:40–44). Indeed, Figure 1 makes clear that when the Stoll cover plate 9 and suction plate 2 are pressed together, the circumferential rib 19 will simply be pressed into the flat portion of the circumferential downward-facing surface of the cover plate 9. In this context, there are no elements that “slide along” each other in the Stoll configuration.

Furthermore, Stoll specifically discloses that the circumferential rib 19 “is **molded to**” the suction plate 2 (5:40–44; emphasis added). Indeed, an inspection of the exploded portion of Figure 1 provided above clearly illustrates that the circumferential rib 19 forms an integral part of the outer peripheral part 3 of the suction plate 2. That

Stoll discloses these two elements as being **molded** together forecloses any possibility of them having surfaces that “slide along” each other “during the adhering of the vacuum fixer onto the adhered surface”, as is recited in Claims 1 and 5.

B. Stoll does not disclose that the suction plate and vacuum wall are both “configured to contact the adhered surface when the vacuum fixer is adhered to the adhered surface”.

Claims 1 and 5 have also been amended to recite that the vacuum wall is “configured to contact the adhered surface when the vacuum fixer is adhered to the adhered surface”. In contrast to this, Stoll expressly discloses that the circumferential rib 19 is molded on the “**top side**” of the suction plate 2 (5:40–45; emphasis added). And this configuration is clearly illustrated in the exploded portion of Figure 1 provided above. Because it is on the top side of the suction plate 2, the circumferential rib 19 certainly cannot “contact the adhered surface when the vacuum fixer is adhered to the adhered surface”.

The Examiner has read Stoll as disclosing that the suction plate 2 has a smaller diameter than that of the circumferential rib 19. However, Figure 1 clearly illustrates the circumferential rib 19 as being positioned radially **inward** from the outer edge of the suction plate 2. This suggests that the Examiner is reading the circumferential rib 19 of Stoll as somehow encompassing the entire outer peripheral part 3 of the suction plate 2, such that the suction plate 2 itself never actually touches the adhered surface. To clarify that Stoll cannot be read this way, Claims 1 and 5 have been amended to specifically recite that **both** the suction plate **and** the vacuum wall are “configured to contact the adhered surface when the vacuum fixer is adhered to the adhered surface”. That is, in Claims 1 and 5 two different elements contact the adhered surface. Figure 1 of Stoll, reproduced above, clearly illustrates that **only** the suction plate 2 contacts the adhered surface.

C. Stoll does not disclose the claimed combination of materials that comprise the pressing plate, the suction plate, and the vacuum wall.

Claims 1 and 5 recite that the vacuum wall is made of gel-type polyurethane, as contrasted with the pressing plate that is made of rigid synthetic resin, and the suction

plate that is made of soft synthetic resin. As noted previously, Figure 1 of Stoll clearly illustrates that the circumferential rib 19 forms an integral part of the outer peripheral part 3 of the suction plate 2. Thus, not only do Claims 1 and 5 recite that two different elements contact the adhered surface, but they also recite that these two different elements are made of different materials. This is yet another reason why the Applicant respectfully disagrees with the Examiner's reading of the Stoll circumferential rib 19 as encompassing the entire outer peripheral part 3 of the suction plate 2.

D. Stoll does not disclose a suction plate having a first diameter and a vacuum wall having a second diameter that is greater than the first diameter.

As noted above, the Examiner has read Stoll as disclosing a suction plate 2 that has a smaller diameter than that of the circumferential rib 19. However, the exploded view of Figure 1 shown above clearly illustrates that the outer peripheral part 3 of the suction plate 2 extends beyond the circumferential rib 19. The suction plate 2 cannot be read as somehow excluding the outer peripheral part 3 because Claims 1 and 5 have been amended to specifically recite that the suction plate is "configured to contact the adhered surface when the vacuum fixer is adhered to the adhered surface". This is yet another example of a features that is recited in Claims 1 and 5 which is not disclosed by Stoll.

E. The disclosure of Zou, Choi and Doran cannot remedy the shortcomings of Stoll.

The Examiner relies on Zou for its asserted teaching of a screw shaft and a screw tightening member coupled to a protruding front end of the screw shaft. The Examiner relies on Choi for its asserted teaching of use of a gel-type polyurethane, and likewise on Doran for its asserted teaching of a vacuum wall that fills fine cracks and indented portions of an adhered surface. Thus the Applicant respectfully submits that the teachings of Zou, Choi and Doran, as applied by the Examiner, cannot remedy the shortcomings of Stoll as expounded above. Even if the teachings of these references were combined as the Examiner suggests, their combination would not yield the particular combination of features recited in independent Claims 1 and 5.

For example, Claim 1 has been amended to recite that “the vacuum wall is made of a gel-type polyurethane formed by mixing a diol compound having a molecular weight of 4,000 ~ 6,000 with methylene-diisocyanate in the ratio of 1 : 8 to 1 : 12”. Likewise, Claim 5 has been amended to recite that “the vacuum wall is made of gel-type polyurethane that is 150 ~ 250 cps in viscosity”. The Examiner has taken the position that these features are obvious based on the teachings of Stoll and optionally Choi. Specifically, the Examiner has stated that discovering the optimum or workable ranges involves only routine skill.

However, a particular parameter must first be recognized as a result-effective variable (that is, a variable which achieves a recognized result) before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation (MPEP 2144.05(II)(B)). In this case, the Examiner has not pointed to any teaching in the cited references that the molecular weight of a dial compound that is mixed with methylene-diisocyanate is a result-effective variable. Nor has the Examiner pointed to any teaching that the mixing ratio of these two components a result-effective variable either. Finally, there has been no reference to a teaching that the viscosity of the gel-type polyurethane that comprises the vacuum wall is a result-effective variable.

F. Conclusion.

Based on the foregoing, the Applicant respectfully submits that the combined teachings of Stoll, Zou, Choi and Doran do not render obvious the invention recited in amended independent Claims 1 and 5. The Applicant therefore respectfully requests that the rejection of Claims 1 and 5 based on this combination of references be withdrawn.

Additionally, because Claims 3, 4, 7 and 9–11 depend from Claim 1, and more specifically define the claimed invention, the Applicant respectfully submits that Claims 3, 4, 7 and 9–11 are allowable over the combined teachings of Stoll, Zou, Choi and Doran for at least the same reasons that Claim 1 is allowable. The Applicant therefore respectfully requests that the rejection of these claims be withdrawn as well.

New Claim 12

New independent Claim 12 recites a vacuum fixer having combination of features that includes, among other things, a pressing plate that is made of a first material, a suction plate that is made of a second material, and a vacuum wall made of a third material that is different from the first and second materials. Both the interior surface of the suction plate and a foot portion of the vacuum wall are configured to be adhered to an adhered surface. More specifically, the foot portion of the vacuum wall is configured to be adhered to the adhered surface “in a circumferential area that surrounds the suction plate”.

The particular combination of features that is recited in new independent Claim 12 is significantly different from the disclosure of Stoll, Zou, Choi and Doran. For example, as expounded above, the suction holder 1 illustrated in Figure 1 of Stoll has only a single element—the suction plate 2—that adheres to the adhered surface. This suction holder 1 includes a circumferential rib 19, but because it is molded on the **top** side of the suction plate 2, it therefore is not “configured to be adhered to the adhered surface in a circumferential area that surrounds the suction plate”, as is recited in new independent Claim 12.

Furthermore, new independent Claim 12 also recites “a plurality of saw-toothed type contact protrusions that extend from the interior surface of the pressing plate and that engage the exterior surface of the suction plate”. The Examiner has previously referred to Stoll as disclosing “a co-centric circular saw-toothed type contract protrusion (43) formed on the inner surface of the pressing plate (Figure 1)”. But, as noted previously, none of the figures in Stoll include a reference numeral 43. The Applicant respectfully submits that Stoll does not disclose the plurality of saw-toothed type contact protrusions which are recited in new independent Claim 12.

No Disclaimers or Disavowals

Although this communication may include amendments to the application, and may characterize the claim scope and/or referenced art, the Applicant does not concede that previously pending claims are not patentable over the cited references. Rather,

any amendments and/or characterizations are being made to facilitate expeditious prosecution of this application. The Applicant reserves the right to later pursue any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history cannot reasonably infer that the Applicant has made any disclaimers or disavowals of any subject matter supported by the present disclosure.

Conclusion

In view of the foregoing, this application is believed to be in condition for allowance, and such allowance is respectfully requested. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact the Applicant's attorney at the number given below.

The Commissioner is authorized (a) to charge LEXYOUME's Deposit Account No. 504054 for any fees required under 37 C.F.R. §§ 1.16 and 1.17 that are not covered, in whole or in part, by a credit card payment form submitted herewith, and (b) to credit any overpayment to said Deposit Account No. 504054.

Respectfully submitted,

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